This course will prepare students to use Microsoft Excel to create and edit professional spreadsheets. Topics include creating cell data, formatting cells and worksheets, and applying formulas and functions. In addition, students will also learn how to analyze and organize data, present data visually by creating charts, manage the worksheet and workbook environment and share workbooks. This course, together with CBA G161, cover the skills needed to prepare for the Excel Core Microsoft Office Specialist Exam (MOS). Keyboarding and basic computing skills are suggested.

JUSTIFICATION FOR COURSE:

PREREQUISITES:

COREQUISITES:

ADVISORIES:

ASSIGNED DISCIPLINES:

Computer science
Office technologies (secretarial skills, office systems, word processing, computer applications, automated office training)

MATERIAL FEE: Yes [ ] No [X] Amount: $0.00

CREDIT STATUS: Noncredit [ ] Credit - Degree Applicable [X] Credit - Not Degree Applicable [ ]

GRADING POLICY: Pass/No Pass [X] Standard Letter [X] Not Graded [ ] Satisfactory Progress [ ]

OPEN ENTRY/OPEN EXIT: Yes [ ] No [X]

TRANSFER STATUS: CSU Transferable[X] UC/CSU Transferable[ ] Not Transferable[ ]

BASIC SKILLS STATUS: Yes [ ] No [X]

CALIFORNIA CLASSIFICATION CODES: Y - Not Applicable

NON CREDIT COURSE CATEGORY: Y - Not applicable, Credit Course

OCCUPATIONAL (SAM) CODE: D

REPEATABLE ACCORDING TO STATE GUIDELINES: No [X] Yes [ ] NUMBER REPEATS:

REQUIRED FOR DEGREE OR CERTIFICATE: No [ ] Yes [X]

Administrative Assistant (Associate in Arts)
Administrative Assistant (Certificate of Achievement)
Associate of Arts: Liberal Arts: Emphasis in Business and Technology (Associate in Arts)
Computer Business Applications (Certificate of Achievement)
Computer Business Applications (Certificate of Specialization)
COURSE LEVEL STUDENT LEARNING OUTCOME(S) Supported by this course:

1. Use relative, absolute, and mixed cell references in formulas; correct circular references; insert a function; insert basic math and statistical functions; use date functions; determine results with the IF function; use lookup functions; calculate payments with the PMT function; create and maintain range names; use range names in formulas.

2. Select the correct data source for creating charts; choose a chart type; move, size, and print a chart; add and format chart elements; apply a chart style and colors; modify the data source; and create and customize sparklines.

3. Freeze rows and columns; print large datasets; design and create tables and apply table styles; sort and filter data; use structured references and total row; apply conditional formatting; and create rules.

4. Explore the Excel window; enter and edit cell data; create formulas; display cell formulas; use Auto Fill; manage worksheets, columns, and rows; select, move, copy, and paste data; apply alignment and font options; apply number formats; select page setup options; and preview and print a worksheet.

COURSE OBJECTIVES:
1. Manage the worksheet environment by entering and editing cell data, and use symbols and the order of precedence in creating formulas and functions.

2. Create formulas and functions using relative, absolute, and mixed cell references, perform basic formula construction using various functions, and determine results of functions.

3. Determine which chart type to design and create; format chart elements such as labels, axes, and gridlines; and insert and customize a sparkline.

4. Create and apply table styles to spreadsheet data; freeze row and column headings; sort and filter table data; and apply conditional formatting.

5. Create one- and two-variable data tables; identify input values with Goal Seek and Scenario Manager; and load Solver and optimize results with Solver.

COURSE CONTENT:

LECTURE CONTENT:

A. Introduction to Excel
   1. Spreadsheet Overview
      a. Planning for Effective Workbook and Worksheet Design
      b. Exploring the Excel Window
      c. Entering and Editing Cell Data
   2. Introduction to Spreadsheets
      a. Using Symbols and the Order of Precedence
      b. Using Auto Fill
      c. Displaying Cell Formulas
   3. Workbook and Worksheet Management
      a. Managing Worksheets
      b. Managing Columns and Rows
      c. Selecting, Moving, Copying, and Pasting
   4. Formatting Worksheets
      a. Applying Alignment and Font Options
      b. Applying Number Formats
      c. Page Setup and Printing

B. Formulas and Functions
   1. Formula Basics
      a. Using Semi-Selection to Create a Formula
      b. Using Relative, Absolute, and Mixed Cell References in Formulas
c. Avoiding Circular References
2. Function Basics
   a. Inserting a Function
   b. Totaling Values with the SUM Function
   c. Inserting Basic Statistical Functions
   d. Using Date Functions
3. Logical, Lookup, and Financial Functions
   a. Determining Results with the IF Function
   b. Using Lookup Functions
   c. Calculating Payments with the PMT Function
4. Range Names
   a. Creating and Maintaining Range Names
   b. Using Range Names in Formulas
C. Charts
   1. Chart Basics
      a. Deciding Which Chart Type to Create
      b. Creating a Chart
   2. Chart Design
      a. Changing the Chart Type
      b. Changing the Data Source and Structure
      c. Applying a Chart layout and a Chart Style
      d. Moving a Chart
      e. Printing Charts
      f. Inserting and Customizing a Sparkline
   3. Chart Layout
      a. Selecting and Formatting Chart Elements
      b. Customizing Chart Labels
      c. Formatting the Axes and Gridlines
      d. Adding a Trendline
D. Datasets and Tables
   1. Large Datasets
      a. Freezing Rows and Columns
      b. Printing Large Datasets
   2. Excel Tables
      a. Understanding Table Design
      b. Creating a Table
      c. Applying a Table Style
   3. Table Manipulation and Aggregation
      a. Sorting Data
      b. Filtering Data
      c. Using Structured References and a Total Row
   4. Conditional Formatting
      a. Applying Conditional Formatting
      b. Creating a New Rule
      c. Sorting and Filtering Using Conditional Formatting
E. What-If Analysis
   1. One- and Two-Variable Data Tables
      a. Creating a One-Variable Data Table
      b. Creating a Two-Variable Data Table
   2. Goal Seek and Scenario Manager
      a. Identifying an Input Value with Goal Seek
      b. Using Scenario Manager
      c. Generating Scenario Summary Reports
3. Solver
   a. Loading the Solver Add-In
   b. Optimizing Results with Solver

LABORATORY CONTENT:

A. Manage the Worksheet Environment
   1. Navigate through a worksheet by using hot keys and the name box.
   2. Print a worksheet or workbook by printing only selected worksheets, printing an entire workbook, constructing headers and footers, and applying printing options such as print titles, page setup, print area, and gridlines.
   3. Personalize the environment by using Backstage by manipulating the Quick Access Toolbar, ribbon tabs and groups, Excel default settings, workbook properties, workbook files and folders; importing data from Excel; applying different name and file formats for different uses by using Save and Save As features.

B. Create Cell Data
   1. Construct cell data by using Paste Special (formats, formulas, values, preview icons, transpose rows and columns, operations, comments, validation, Paste as Link), and cutting, moving, and selecting cell data.
   2. Apply AutoFill to copy data, fill series, copy or preserve cell format, and select data from drop-down list.
   3. Apply and manipulate hyperlinks in a cell; modify hyperlinks and hyperlinked-cell attributes, and remove a hyperlink.

C. Format Cells and Worksheets
   1. Apply and modify cell formats by aligning cell content, applying a number format, wrapping text in a cell; and using Format Painter.
   2. Merge or split cells by using Merge and Center, Merge Across, Merge Cells, and Unmerge Cells.
   3. Create row and column titles by printing row and column headings, printing rows to repeat with titles, printing columns to repeat with titles, configure titles to print only on odd or even pages, configure titles to skip the first worksheet page.
   4. Hide and unhide rows and columns; hide a series of columns, and hide a series of rows.
   5. Manipulate Page Setup options for worksheets by configuring page orientation, managing page scaling, configuring page margins, and changing header and footer size.
   6. Create and apply cell styles.

D. Manage Worksheets and Workbooks
   1. Create and format worksheets by inserting copying, repositioning, copying and moving, renaming, grouping worksheets, and applying color to and hiding and unhiding worksheet tabs.
   2. Manipulate window views by splitting window views, arranging window views, and opening a new window with contents from the current worksheet.
   3. Manipulate workbook views by using Normal, Page layout, and Page Break workbook views; and creating custom views.

E. Apply Formulas and Functions
   1. Create formulas by using basic operators and revising formulas.
   2. Enforce precedence by order of evaluation, using parentheses, mathematical operators, and operators for percent vs. exponentiation.
   3. Apply cell references in formulas such as absolute and relative.
   4. Apply conditional logic in formulas by creating formulas with values that match conditions; editing defined conditions in a formula; and using a series of conditional logic values in formulas.
   5. Apply named ranges in formulas by defining, editing, and renaming a named range.
   6. Apply cell ranges in formulas by entering a cell range definition in the formula bar, defining a cell range using the mouse, and defining a cell range using a keyboard shortcut.

F. Present Data Visually
   1. Create charts based on worksheet data.
2. Apply and manipulate illustrations using Clip Art, SmartArt, shapes, and screenshots.
3. Create and modify images by using the Image Editor to make corrections to an image (sharpen or soften an image, changing brightness, and contrast), using picture color tools, and changing artistic effects on an image.
4. Apply Sparklines by using Line, Column, and Win/Loss chart types; creating, customizing, and formatting a Sparkline chart; and showing or hiding data markers.

METHODS OF INSTRUCTION:
A. Lecture:
B. Lab:
C. Online:
D. Independent Study:
E. Hybrid:

INSTRUCTIONAL TECHNIQUES:

COURSE ASSIGNMENTS:
Reading Assignments
Textbook
SimNet for Office 2016 (Optional)

Out-of-class Assignments
Additional projects may be completed to demonstrate further competence in using software applications.

Writing Assignments
Hands-on projects will be completed to demonstrate technology competencies to create professional-looking spreadsheets.

METHODS OF STUDENT EVALUATION:
Midterm Exam
Final Exam
Short Quizzes
Written Assignments
Objective Examinations
Report
Projects (ind/group)
Problem Solving Exercises
Skills Demonstration

Demonstration of Critical Thinking:
Students will create various spreadsheets with charts using Excel formulas, functions, and charting features; explore and use the new features and functionality of the software program to create professional-looking spreadsheets.

Required Writing, Problem Solving, Skills Demonstration:
Hands-on projects will be completed to demonstrate technology competencies to create professional-looking spreadsheets.

TEXTS, READINGS, AND RESOURCES:
TextBooks:

Other:
1. Open Educational Resources for Microsoft Excel.

LIBRARY:
Adequate library resources include:

Comments:

Attachments:
Attached Files